

HEEL AND SOLE ASSEMBLY

BACKGROUND OF THE INVENTION

Field of the Invention

The present invention relates to a heel and sole assembly, and
5 more particularly to a transparent high heel assembly.

Description of the Prior Arts

Based on the prior arts, normally there are two ways of fixing a
transparent heel to a sole. One way is spreading adhesive directly on the
top surface of the heel or on the lower surface of the sole, and then
10 adhere the heel to the sole. Another way as shown in Fig. 1, wherein a
sole 10 is defined with a locating hole 12, a top surface of a heel 20 is
define provided with an aperture 17, and then the heel 20 is locked with
the sole 10 by virtue of screws 40 and washers 41.

However, since most of the user's weight burdens on the
15 conjunction between the heel and the sole, the heel attached to the sole
through adhesive is susceptible to separating after a certain period of
usage due to the adhesive is too weak. Such that not only the service life
of the shoe is shortened but also the user's ankle will be sprained.

As another screwed type of heel and sole assembly is concerned,
20 the heads of the screws will protrude out or sink into the top surface of
the sole after the screws are screwed in the heel. Such that the top surface
of the sole is uneven, which will further discomfort the user after a
certain distance of walking. Furthermore, if the heel is transparent, the

screws can be clearly seen in the heel such that the aesthetic beauty of heel will be spoiled.

The present invention has arisen to mitigate and/or obviate the afore-described disadvantages of the conventional heel and sole assembly.

5 **SUMMARY OF THE INVENTION**

 The primary object of the present invention is to provide a heel and sole assembly, wherein a sole of which is provided with a locating hole, and a heel is formed with a locating groove. The heel attaches to a lower surface of the sole and the locating groove is aligned to the
10 locating hole of the sole. A connecting sheet has a connecting surface which is protruded with an engaging column, the engaging column of the connecting sheet engages in the locating groove of the heel. In this manner, the heel and the sole can be assembled together easily and firmly, so as to save the assembly time.

15 The secondary object of the present invention is to provide a heel and sole assembly, wherein the heel is defined with a shallow recess, which allows the connecting sheet to flatly abut against the sole, so as to obviate the disadvantage of uneven top surface of the sole generated in the conventional screwed type hole and sole assembly.

20 The present invention will become more obvious from the following description when taken in connection with the accompanying drawings, which shows, for purpose of illustrations only, the preferred embodiments in accordance with the present invention.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a cross sectional assembly view of a conventional heel and sole assembly;

Fig. 2 is an exploded view of a heel and sole assembly in accordance with a first embodiment of the present invention;

Fig. 3 is an exploded view of a heel and sole assembly in accordance with a second embodiment of the present invention;

Fig. 4 is a cross sectional assembly view of a heel and sole assembly in accordance with a second embodiment of the present invention;

Fig. 5 is an exploded view of a heel and sole assembly in accordance with a third embodiment of the present invention;

Fig. 6 is a cross sectional assembly view of a heel and sole assembly in accordance with a third embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED

EMBODIMENTS

Referring first to Fig. 2, wherein a heel and sole assembly in accordance with the present invention is shown and generally comprised of a sole 10, a heel 20 and a connecting sheet 30.

The sole 10 is provided with an upper surface 11 which corresponds to user's foot, at the rear end of the upper surface 11 a shallow recess 12 is formed, at the center of the recess 12 is defined with a locating hole 13. The sole 10 is further provided with a lower surface

14 and a front upper 15, the front upper 15 corresponds to the back of user's foot. An anti-skid sheet 16 is defined on the lower surface 14 of the sole 10.

The heel 20, on a top surface 21 of which is defined a locating
5 groove 22. The heel 20 is attached to the lower surface 14 of the sole 10. The locating groove 22 is aligned to the locating hole 13 of the sole 10.

The connecting sheet 30, a bottom of which is a connecting
surface 31 which is downwardly protruded with an engaging column 32.
The engaging column 32 serves to travel through the locating hole 13 of
10 the sole 10 and then insert in the locating groove 22 of the heel 20, while the connecting surface 31 of the connecting sheet 30 abutting against the bottom of the shallow recess 12 in the sole 10.

The heel 20 is attached to the lower surface 14 of the sole 10 so
as to align the locating groove 22 to the locating hole 13 of the sole 10,
15 and then the engaging column 32 travels through the locating hole 13 and inserts in the locating groove 22 of the heel 20. In this manner, the heel 20 and the sole 10 can be assembled together easily and firmly.

Referring again to Fig. 2, wherein the connecting surface 31 of
the connecting sheet 30 is used to abut against the bottom of the recess
20 12 of the sole 10, and then the engaging column 32 of the connecting sheet 30 is inserted in the locating groove of the heel 20. Such that the disadvantage of the conventional heel and sole assembly, namely uneven upper surface 14 of the sole 10 caused by screws 40 will be obviated, and

the aesthetic beauty of the transparent heel 20 is accordingly improved.

Referring to Figs. 3 and 4, which show a heel and sole assembly in accordance with a second embodiment of the present invention. Wherein on the top surface 21 of the heel 20 is formed with a sidewall 23 which defines a locating groove 22. The sidewall 23 of the heel 20 is inserted in the locating hole 13 of the sole 10, and then the engaging column 32 of the connecting sheet 30 engages in the locating groove 23 of the sole 20. In this way, the heel 20 and the sole 10 can be assembled together easily and firmly.

Referring to Figs. 5 and 6, which show a heel and sole assembly in accordance with a third embodiment of the present invention. Wherein the engaging column 32 of the connecting sheet 30 is additionally provided with two tenon holes 33, on the bottom of the locating groove 23 of the heel 20 is correspondingly provided with two tenons 24. The two tenons 24 of the heel 20 insert in the corresponding tenon holes 33 of the sole, in this way, the contacting area between the connecting sheet 30 and the heel 20 is increased, therefore, the heel 20 and the sole 10 can be assembled together easily and firmly. The assembly of this embodiment is same as that of the second embodiment, further remarks on this matter would seem superfluous.

While we have shown and described various embodiments in accordance with the present invention, it should be clear to those skilled in the art that further embodiments may be made without departing from

the scope of the present invention.